

FIG. 1

## Figure 2

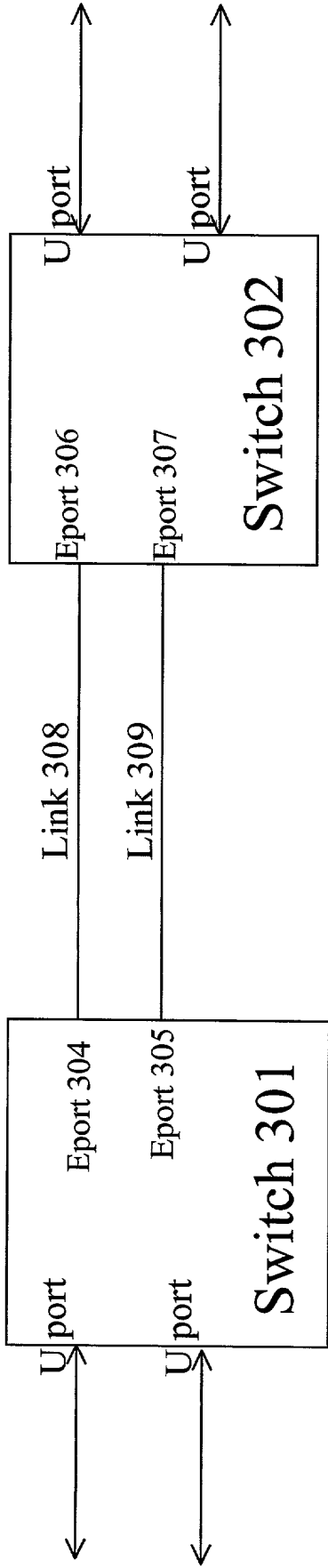


Figure 3



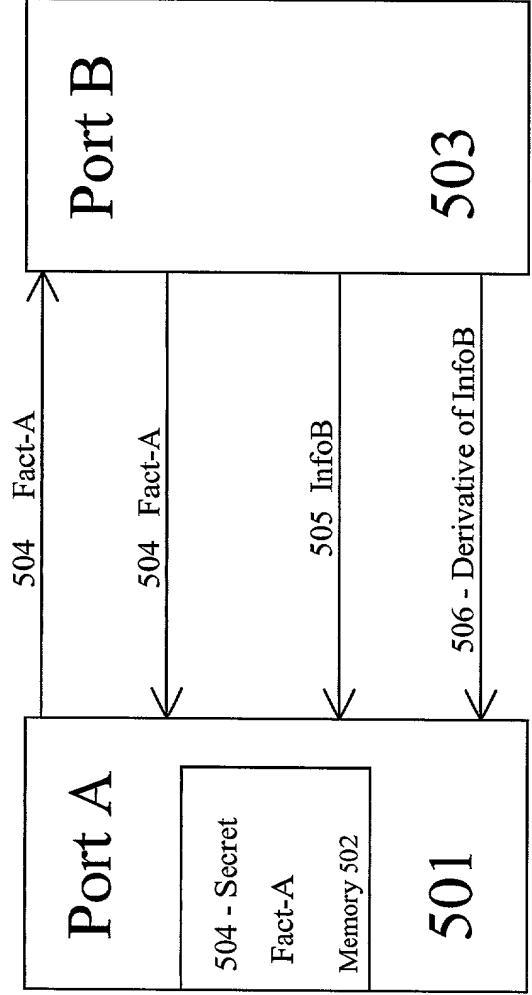


Figure 5a

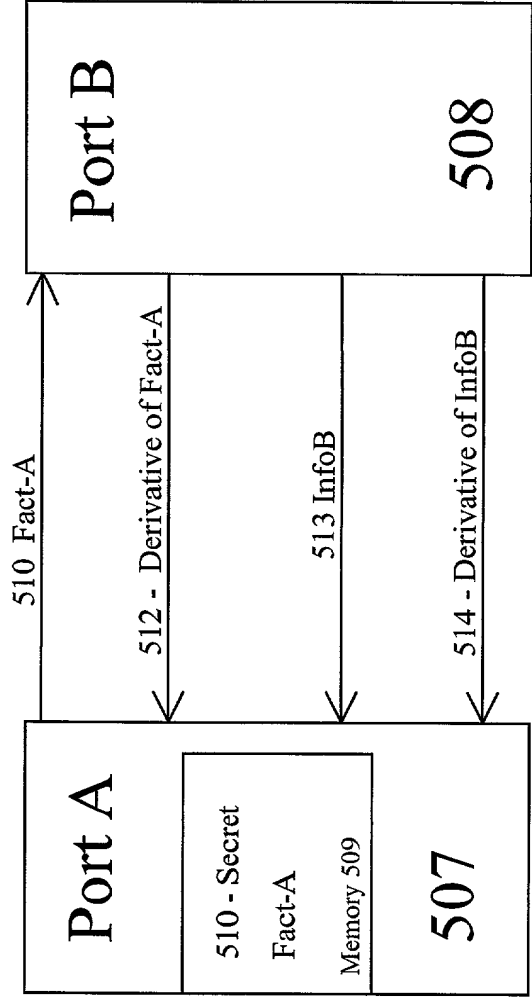


Figure 5b

517 Fact-A  
 Type 1 Derivative of Fact-A  
 519  
 520 InfoB  
 Type 2 Derivative of InfoB  
 521

Figure 5c

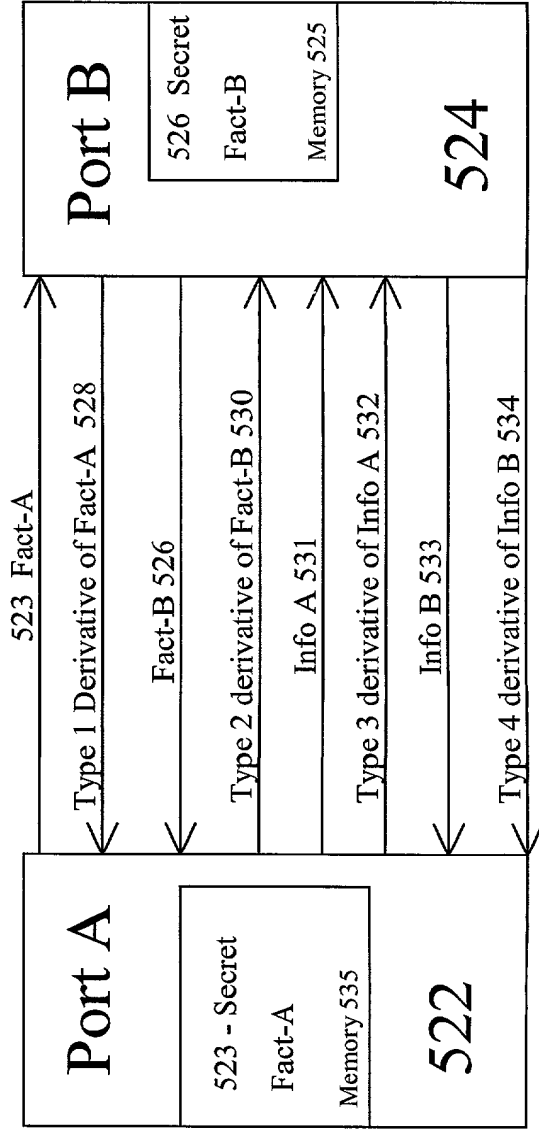
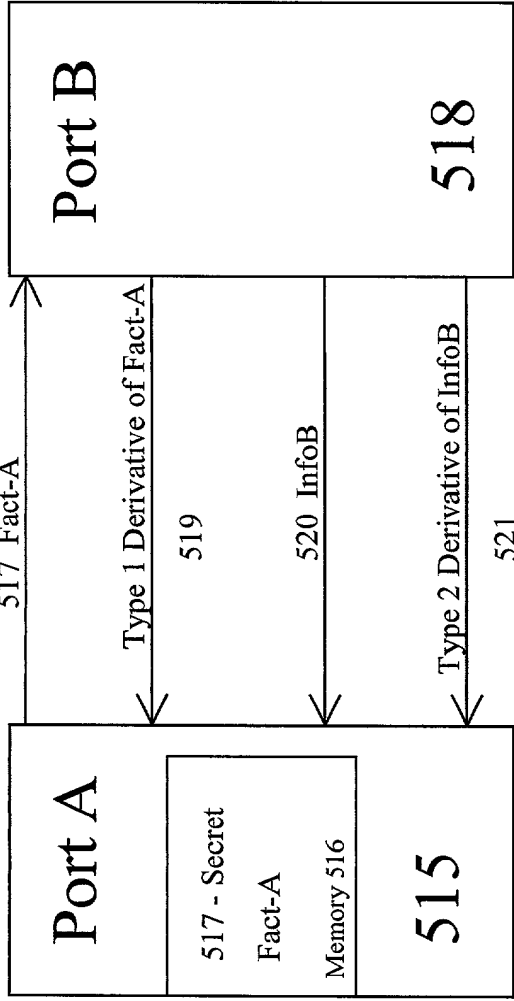


Figure 5d









FIG. 9 is a flowchart illustrating a mutual authentication process between two switches, Switch A and Switch B. The process begins with Switch A initiating the process (901). Switch A generates and stores a random number Ra (930). Switch A then sends a SLAP\_Request [Ra] to Switch B (902). Switch B receives the request and generates and stores a random number Rb (905). Switch B then sends a SLAP\_Acknowledge [Rb, Sb(Ra), Cb] to Switch A (906). Switch A receives the acknowledgment and verifies B's certificate (Cb) (907). If the verification fails, authentication fails. If the verification succeeds, Switch A verifies B's signature (Sb) (908). If the verification fails, authentication fails. If the verification succeeds, Switch A sends a SLAP\_Confirm [Sa(Rb), Ca] to Switch B (909). Switch B receives the confirmation and verifies A's certificate (Ca) (910). If the verification fails, authentication fails. If the verification succeeds, Switch B verifies A's signature (Sa) (912). If the verification fails, authentication fails. If the verification succeeds, Switch B sends a SLAP\_Done to Switch A (913). Switch A receives the done message and concludes that two ports on switches A and B are mutually authenticated (914).

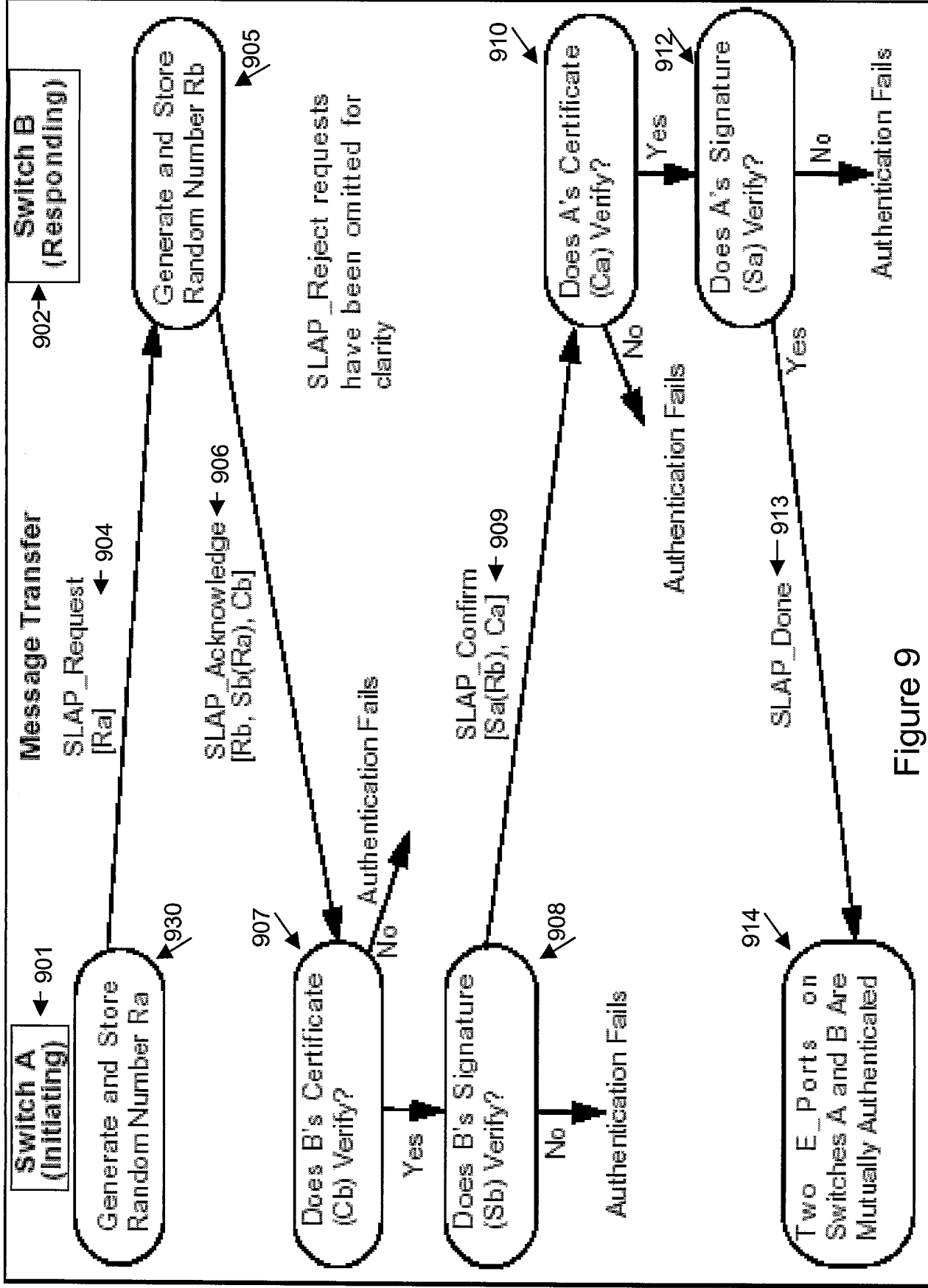


Figure 9

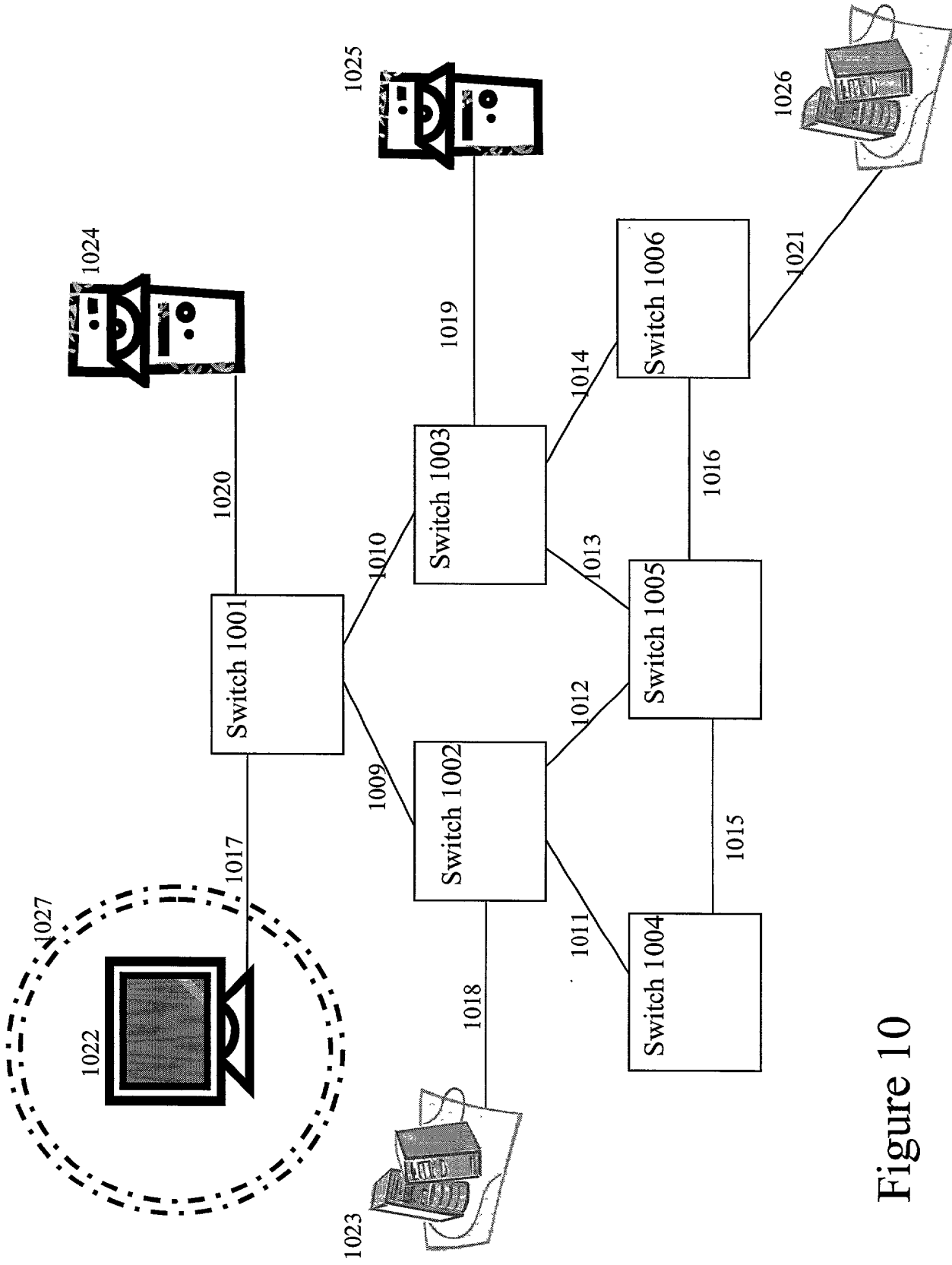


Figure 10

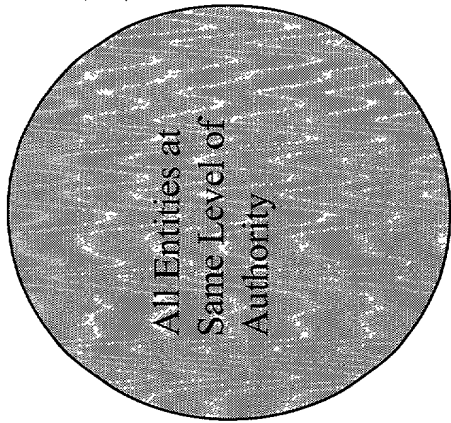


Figure  
11a

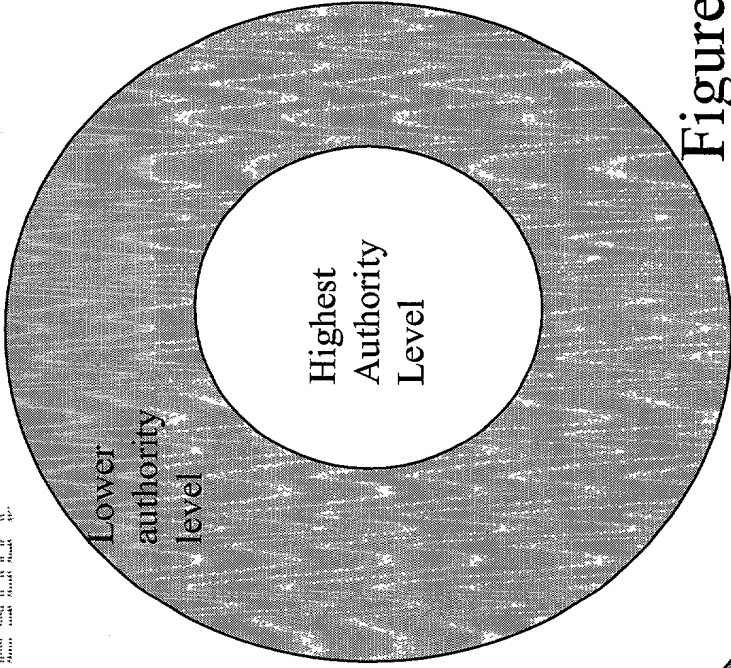


Figure  
11b

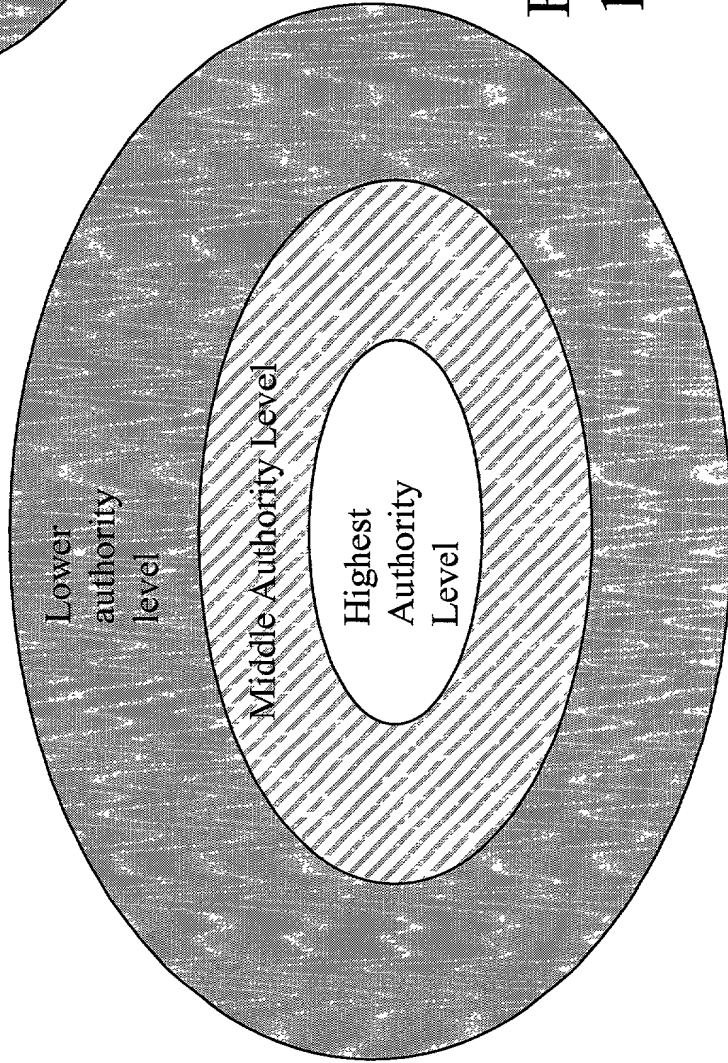


Figure  
11c

FIG. 12 is a schematic diagram of a network topology. The network includes a central core of three switches: Switch 1201, Switch 1202, and Switch 1203. Switch 1201 is connected to Switch 1202 via link 1209, and Switch 1202 is connected to Switch 1203 via link 1210. Switch 1201 is also connected to Switch 1203 via link 1219. Switch 1201 is connected to a server rack 1222 via link 1217. Switch 1202 is connected to a server rack 1223 via link 1218. Switch 1203 is connected to a server rack 1224 via link 1220. Switch 1201 is connected to a server rack 1225 via link 1221. Switch 1202 is connected to a server rack 1226 via link 1222. Switch 1203 is connected to a server rack 1227 via link 1223. Switch 1201 is connected to a server rack 1228 via link 1224. Switch 1202 is connected to a server rack 1229 via link 1225. Switch 1203 is connected to a server rack 1230 via link 1226. Switch 1201 is connected to a server rack 1231 via link 1227. Switch 1202 is connected to a server rack 1232 via link 1228. Switch 1203 is connected to a server rack 1233 via link 1229.

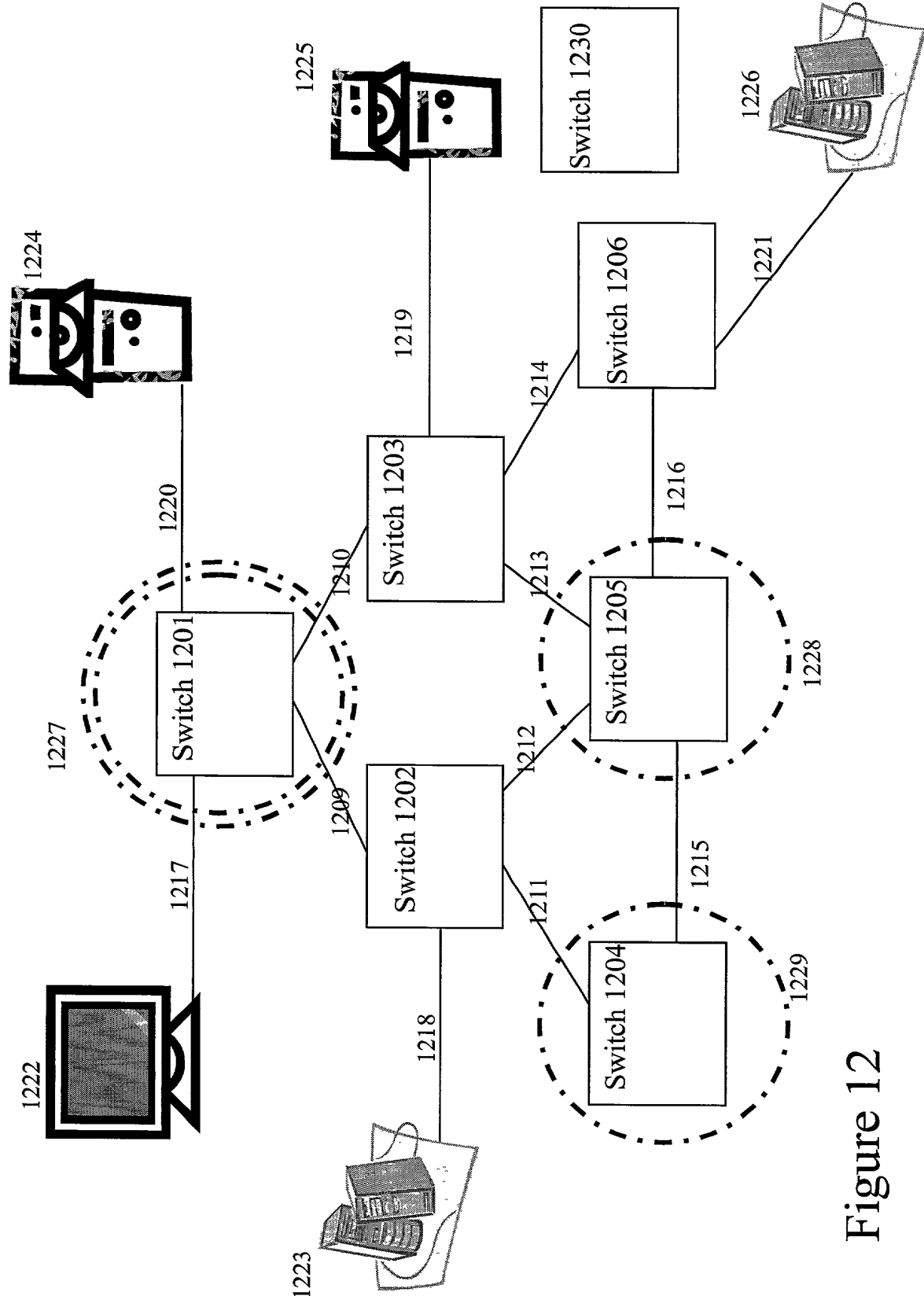
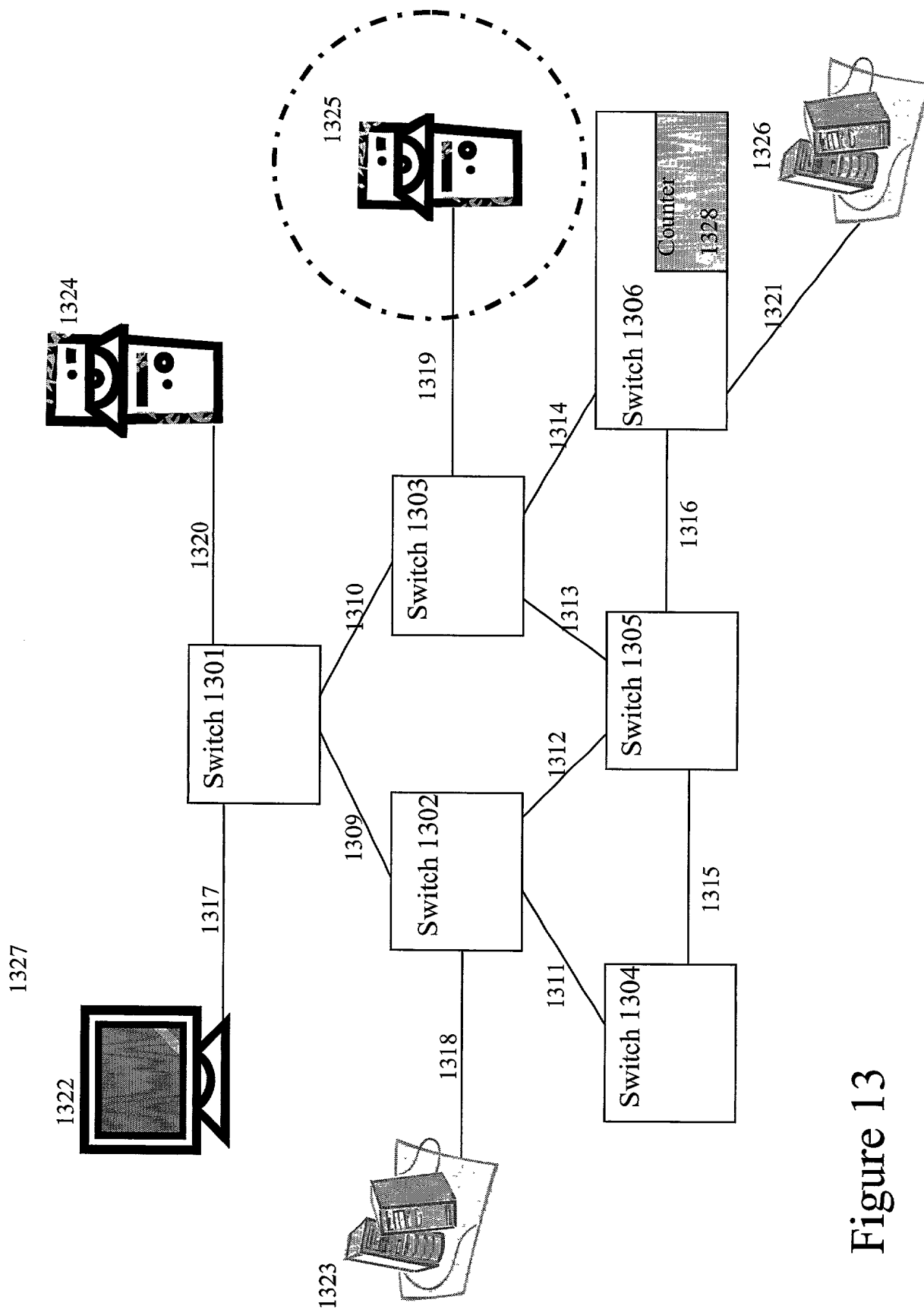
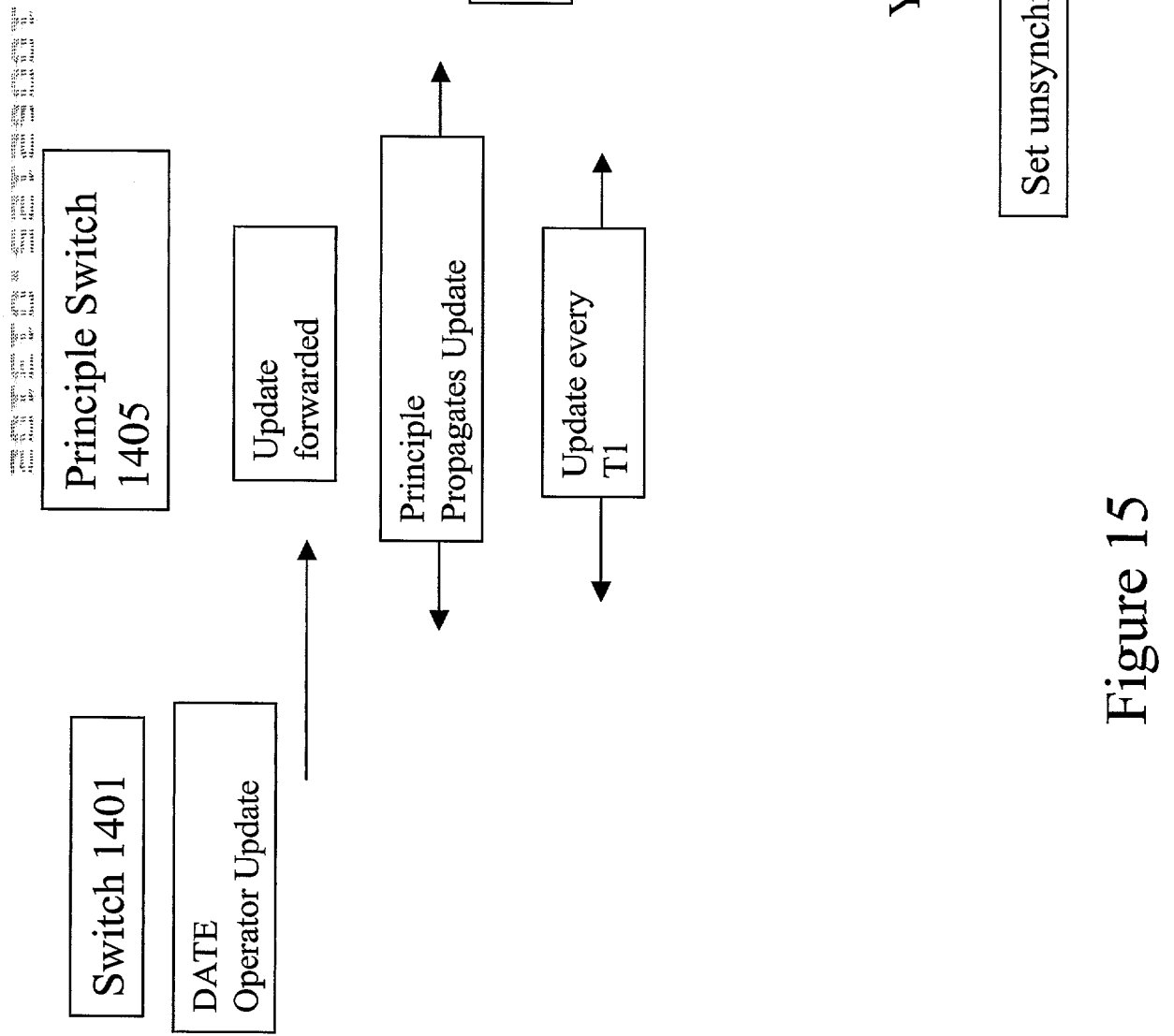


Figure 12



## Figure 13







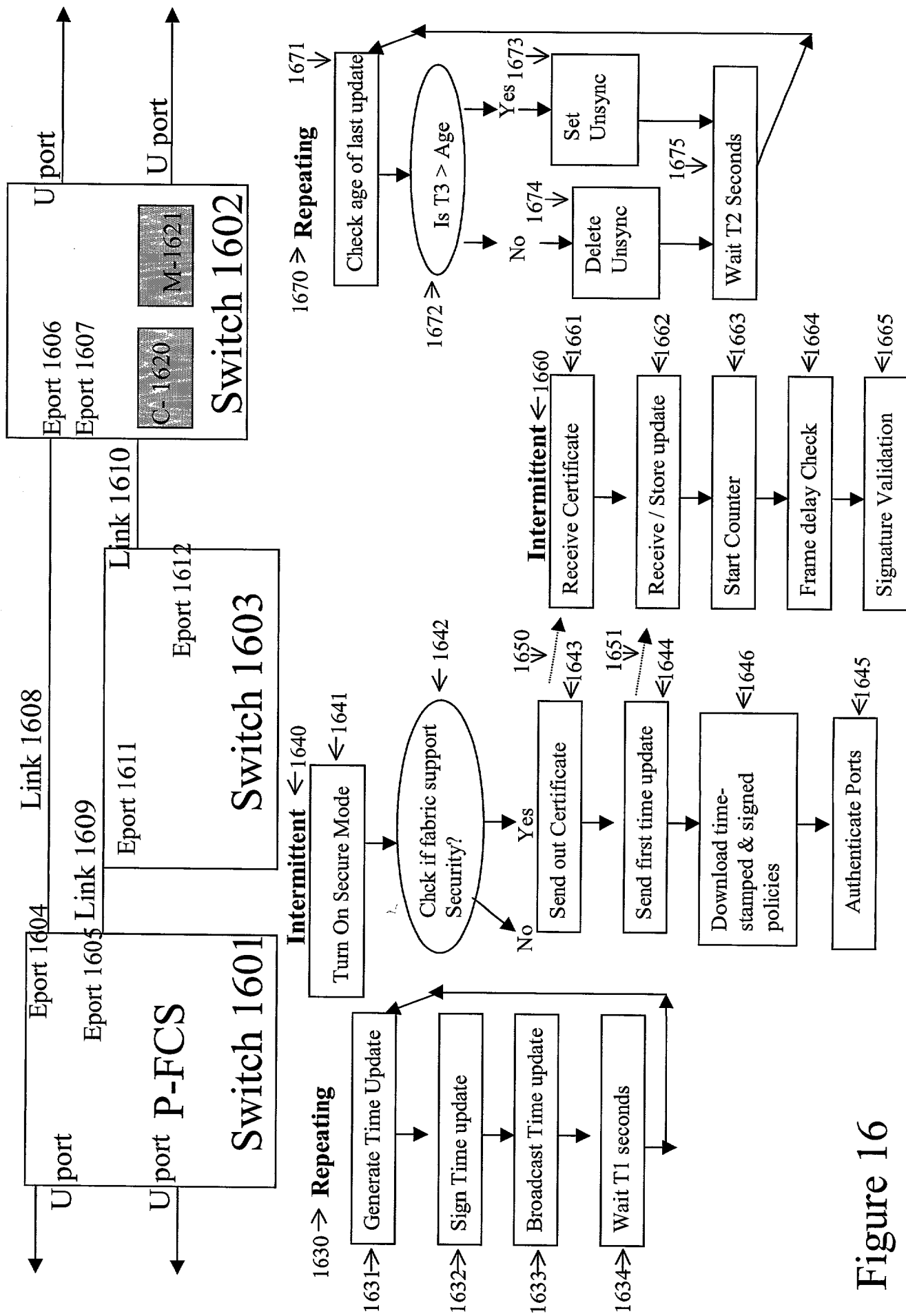


Figure 16